(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 20 January 2005 (20.01.2005)

PCT

(10) International Publication Number WO 2005/004848 A1

(51) International Patent Classification7:

A61K 9/14

(21) International Application Number:

PCT/KR2004/001684

(22) International Filing Date:

9 July 2004 (09.07.2004)

(25) Filing Language:

Korean

(26) Publication Language:

English

(30) Priority Data: 10-2003-0046550

9 July 2003 (09.07.2003)

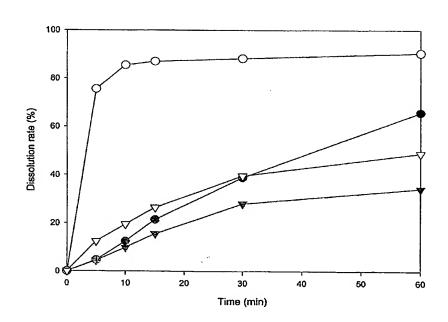
- (71) Applicant (for all designated States except US): CHONG KUN DANG PHARMACEUTICAL CORP. [KR/KR]; #368, Chungjeongro 3ga, Seodaemun-gu, Seoul 120-756 (KR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SHIN, Hee-Jong

[KR/KR]; 1404-101, Yeonhwamaeul., #14-1, Jung2-dong, Wonmi-gu, Bucheon-si, Gyeonggi-do 420-022 (KR). LIM, Jong-Lae [KR/KR]; 102-738 Dongbo Apt., #253-38. Mosi-ri, Jiksan-myeon, Cheonan-si, Chungcheongnam-do 330-814 (KR). KI, Min-Hyo [KR/KR]; 102-105, Sindonga Apt, Sinbang-dong, Cheonan-si, Chungcheongnam-do 330-766 (KR). YUN, Ji-Hun [KR/KR]; 102-1404, Wolbong-Daewoo Apt., #1548, Ssangyong-dong, Cheonan-si, Chungcheongnam-do 330-090 (KR).

- (74) Agent: ROH, Jae-Chull; 6F., Seil Building, #727-13, Yeoksam-dong, Gangnam-gu, Seoul 135-080 (KR).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,

[Continued on next page]

(54) Title: THE SOLID DISPERSION OF TACROLIMUS



(57) Abstract: The present invention relates to the carrier of the solid dispersion of tacrolimus, which is prepared by using the solid surfactant having a property of HLB value higher than or equal to about 7. The surfactants carry out a function of a carrier and a function of a dissolution enhancer, simultaneously. As a result, the dissolution rate of tacrolimus is improved, and the oral absorbability and the bioavailability may be increased due to rapid drug release.

O; Example 26(capsule)

▼; Comparative example 1(capsule)

♥; Comparative example 2(capsule)

•: Comparative example 3(prograf)

WO 2005/004848 A1

PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.